ZHUKOVSKIY, S.R.; KAZANTSEV, V.F.; MAKAROV, L.O.

Using high speed cinematography for investigating the processes occurring in fluids under the action of ultrasonic waves. Zhur. nauch.i prikl.fot.i kin. 5 no.2:133-140 Mr-Ap '60. (MIRA 14:5)

1. Kafedra uchebnoy i nauchnoy fotografii i kinematografii Moskovskogo gosudarstvennogo universiteta im. M.V.Lomonosova i Akusticheskiy institut AN SSSR.
(Motion-picture photography—Scientific applications)
(Ultrasonic waves)

KAZANTSEV, V.F.; TISENBAUM, Yu.L.

Study of the temperature dependence of the velocity of ultrasonic treatment. Akust.zhur. 7 no.2:260-262 '61. (MIRA 14:6)

1. Akusticheskiy institut AN SSSR, Moskva.
(Ultrasonic waves—Industrial applications)

S/046/61/007/004/011/014
B104/B102

AUTHORS: Kazantsev, V. F., Tisenbaum, Yu. L.

TITLE: Character of motion of an abrasive suspension in ultrasonic treatment

PERIODICAL: Akusticheskiy zhurnal, v. 7, no. 4, 1961, 493-495

TEXT: The transport of abrasive material has been investigated experimentally in a working gap for an abrasive suspension. Fig. 1 shows a diagram of the test layout. Tools of different types were used to obtain openings 2 in a glass plate 1. While working on the glass plate it was possible to observe the motion of abrasive particles in the opening. A high-speed camera 3 was located perpendicular to the plane of the tool. The СКС-1 (SKS-1) camera was operated with 1000-5500 pictures per second, and the movie camera "Konvas" with 24 pictures per second. The pictures were enlarged twice their size. Three СВДШ 250 (SVDSh-250) mercury lamps, 4, arranged under an angle of 120°, were used as light sources. The experiments were made with an ultrasonic machine 4770; the vibration amplitude of the tool measured was 30μ, and its frequency 18 kc/sec.

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Boron carbide no.80 was employed. The motion pictures showed that there was no intermixture of abrasive particles in the working gap. The random motion of particles was of very high velocity. In several cases, the coarse particles were moving slowly along the tool. Cavitation and gas bubbles showed a strong effect on the particle motion in the working gap. The random motion of bubbles occurred at a higher velocity than that of the particles. Steady microflows formed around the bubbles, and collected the fine particles. These fine particles moved at the same velocity as the bubbles to the end of the tool. The motion of coarse particles (~1mm/sec) is related to elastic vibrations of the tool. This does not affect the processing rate. Even a slowing-down of the processing rate by coarse particles has been established (Blank D., Pahlitzsch. Fortschritte beim Stosslaeppen mit Ultraschallfrequenz. Werkstattstechnik, 1960, 50, 592-599). There are 1 figure and 5 references: 1 Soviet and 4 non-Soviet. The three references to English-language publications read as follows: E. A. Neppiras. Report on Ultrasonic machining. Metalworking production. 1956, 100, 28, 1339; E. J. Jackson, W. L. Nyborg. Microscopic eddying near a vibrating ultrasonic tool tip. J. Appl. Phys., 1959, 30, 949 - 950; E. J. Jackson, W. L. Nyborg. Sonically induced microstreaming

Character of motion of an abrasive ... S/046/61/007/004/011/014
B104/B102

near a plane boundary. J. Acoust. Soc. America, 1959, 32, 10, 1243-1250; 11, 1387-1392.

ASSOCIATION: Akusticheskiy institut AN SSSR Moskva (Acoustics Institute AS USSR, Moscow)

SUBMITTED: July 14, 1961

Card 3/3

KAZANTSEV, V.F.

PHASE I BOOK EXPLOITATION SOV/6312

Rozenberg, L. D., V. F. Kazantsev, L. O. Makarov, and D. F. Yakhimovich

Ul'trazvukovoye rezaniye (Ultrasonic Machining) Moscow, Izd-vo AN SSSR, 1962. 251 p. Errata slip inserted. 5000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Akusticheskiy institut.

Resp. Eds.: V. I. Dikushin, Academician, and L. D. Rozenberg, Doctor of Technical Sciences; Ed. of Publishing House: L. V. Gessen; Tech. Ed.: A. P. Guseva.

PURPOSE: This book is intended for scientific workers, design and process engineers, and for aspirants working in the field of ultrasonic machining.

COVERAGE: Although the book is mostly based on results of investigations conducted by the authors in the ultrasonic laboratory of the Acoustics Institute, Academy of Sciences USSR, and

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in the Special Design Bureau of Mosgorsovnarkhoz, an attempt is made to review, generalize, and sum up all available information, both Soviet and non-Soviet, on different aspects of ultrasonic machining. No personalities are mentioned. References accompany each chapter.

TABLE OF CONTENTS:

S/121/63/000/003/002/005
E194/E455

AUTHOR: Kazantsev, V.F.

TITLE: The relationship between the productivity of ultrasonic machining and the cutting conditions

PERIODICAL: Stanki i instrument, no.3, 1963, 12-15

TEXT: Two of the principal factors governing the productivity of ultrasonic machining are the amplitude of oscillation ξ_m and the pressure applied by the spring p_{np}. Analysis of previous work on this subject leads to an expression of the form

$$F_{max} \sim \sqrt{\xi_m p_{np}}$$

where F_{max} - the maximum force on impact. Careful measurements of mechanical stress on impact were not in accordance with this relationship. Accordingly the relationships between this stress and machining conditions were studied in more detail, using a polarized-light technique to measure the stresses during the process of machining a glass part. In this way the stress at any point could be measured as a function of time. It was found that

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The relationship between ...

the maximum forces during the process of ultrasonic machining are several times greater than the spring application pressure, and the maximum stress in the impulse depends both on the spring pressure and on the amplitude. The maximum stress in the impulse was found to increase steadily with increased spring pressure. Previous authors have not observed this because they have not noticed that the amplitude decreases when the pressure is increased. If the frequency of oscillation is adjusted to match the natural frequency of the system there is much less change in amplitude on increasing the spring pressure. In tests in which the amplitude was maintained constant it was found that the stress depends only on the amplitude and on the spring pressure and not on the cross-section of the tools. Experimental results suggest the following expression for the maximum stress on impact σ_m

$$\sigma_m = C\sqrt[3]{\tfrac{1}{2}m^2 p_{np}}$$

It is shown that the results of other authors fit this expression fairly well. Simple analysis shows that the best way of

S/121/63/000/003/002/005
E194/E455

The relationship between ...

increasing the rate of machining is to increase the amplitude of oscillation but it is difficult to achieve amplitudes greater than 40 to 50 μ. Increasing the spring pressure also increases the machining speed because the energy actually used in machining is only about 5% of the total energy, the rest being lost in the oscillatory system. Increasing the spring pressure increases the proportion of energy used in removing material without much affecting the input energy. However, if the spring pressure is too high there is a fall-off in machining speed because the abrasive particles themselves break up. There are 8 figures.

Card 3/3

KAZANTSEV, V.F.

Stresses in material undergoing ultrasonic machining as dependent on the vibration amplitude and the force of tool impact. Akust. zhur. 9 no.1:120-122 '63. (MIRA 16:5)

1. Akusticheskiy institut AN SSSR, Moskva.
(Ultrasonic waves--Industrial applications)
(Strength of materials)

KAZANTSEV, V.F.

Method for measuring ultrasonic stresses in transparent bodies. Akust. zhur. 9 no.2:236-238 '63. (MIRA 16:4)

1. Akusticheskiy institut AN SSSR, Moskva.
(Ultrasonic waves) (Strains and stresses)

KAZANTSEV, V. F.

"On the Mechanism of Ultrasonic Cutting."

report submitted for Ultrasonic Symp, Santa Monica, Calif, 14-16 Oct 64.

Acoustics Inst, AS USSR.

ACCESSION NR: AP3000824 S/0046/63/009/002/0236/0238

AUTHOR: Kazantsev, V. F.

TITLE: A method of measuring ultrasonic stresses in transparent bodies

SOURCE: Akusticheskiy zhurnal, v. 9, no. 2, 1963, 236-238

TOPIC TAGS: ultrasonic stress, transparent body, polaroid, oscillograph, dynamic stress, light beam, focusing prism

ABSTRACT: A simplified test method has been described to determine ultrasonic stresses in a stationary process which measures stress as a function of time in any point in a transparent body. At every moment the amount of light passing through a polaroid and some part of the object under investigation subjected to an ultrasonic process is measured (see Fig. 1 on the Enclosure). A calibration chart is given for a 7-mm diameter instrument. In the absence of light beam fluctuations (created at the light source) the relative measurement error is 1 to 2%. A pulse sample on an oscillograph screen is included. This is plotted in terms of F_{pr}(kg) versus time in msec. The author claims this method to be applicable to dynamic stress determination in transparent solid bodies and plates. "I express my gratitude to A. I. Kiryushchenko, A. I. Ageyeva, and V. I. Shukhat for their help in the experiments." Orig. art. has: 4 figures.

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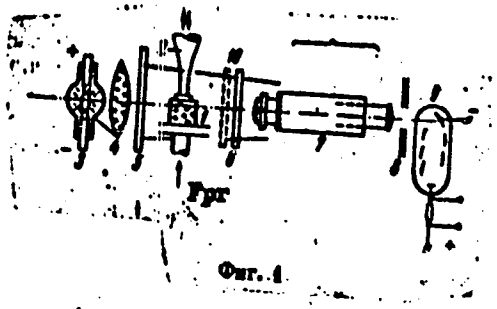
ACCESSION NR: AP3000824

ENCLOSURE: 01



Фиг. 1

Fig. 1. 1- glass specimen; 2- 20-kc concentrator; 3- mercury lamp (light source); 4- focusing prism; 5- polarizor; 6- analyzer; 7- type MI-1 microscope with FM-3 photo-attachment; 8- diaphragm; 9- FEV-19 photomultiplier.

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L 4089-66 EWT(d)/EWT(m)/EWP(v)/EWP(k)/EWP(t)/EWP(h)/EWP(b)/EWP(l) JD

ACC NR: AP5023999 SOURCE CODE: UR/0020/65/164/002/0311/0314

AUTHOR: Rozenberg, L. D.; Kuzantsev, V. F.; Mechetner, B. Kh.

ORG: Acoustic Institute, Academy of Sciences, SSSR (Akusticheskiy institut Akademii nauk SSSR); Experimental Scientific Research Institute of Metal-Cutting Machine Tools (Experimental'nyy nauchno-issledovatel'skiy institut metallorezhushchikh stankov)

TITLE: Increasing the efficiency of ultrasonic machining

SOURCE: AN SSSR. Doklady, v. 164, no. 2, 1965, 311-314

TOPIC TAGS: ultrasonic machining, abrasive slurry, abrasive slurry natural feed, abrasive slurry forced feed, ultrasonic machine efficiency

ABSTRACT: The newly developed 4772A and 4773A ultrasonic machine tools substitute forced feeding of abrasive slurry for the natural feeding in the parent model 4772. Fresh abrasive slurry is forced from a tank by compressed air at a pressure of 1—3.5 atm through a hole in the transducer (tool) into the working zone. The worked-out slurry flows into a settling tank. Continuous flow of fresh abrasive slurry with a required abrasive grain size makes the machining speed independent of the depth of the machined surface. Continuous flow also makes it possible to increase the tool pressure on the surface being machined, which, in turn, increases the ma-

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L 4069-66

ACC NR: AP5023999

chining rate by 3—4 times and decreases the specific energy required for metal removal. Parent model 4772, which has a 1.5-kw generator, removed 1200 mm^3 of glass per min at a specific energy consumption of 75 j/mm^3. Model 4772A, which has a 1.5-kw generator, removes 5000 mm^3/min at a specific power consumption of 18 j/mm^3. The corresponding figures for model 4773A, which has a 4.0-kw generator, are 12,000 mm^3/min and 20 j/mm^3. Author Certificate No. 149666 was issued to L. D. Rosenberg, et al., in 1962 for the new fuel system. Orig. art. has: 4 figures and 1 table. [MS]

SUB CODE: IE,GP,MM/SUBM DATE: 03Feb65/ ORIG REF: 003/ OTH REF: 003/ ATD PRESS: 4128

BVK
Card 2/2

L 46139-66 EWT(l)/EWP(e)/EWT(m)/T-2/EWT(t)/ETI/EWP(k) IJP(c) JD/WW/WH

ACC NR: AP6022884 SOURCE CODE: UR/0121/66/000/004/0023/0027

AUTHOR: Kazantsev, V. F.; Mechetner, B. Kh.; Rozenberg, L. D.

ORG: None

TITLE: Increasing the productivity and accuracy of ultrasonic machining

SOURCE: Stanki i instrument, no. 4, 1966, 23-27

TOPIC TAGS: ultrasonic machining, ultrasonic machine tool, abrasive, machine vibration, production engineering, vacuum pump

ABSTRACT: The problem of reliable abrasive suspension volume in the machining zone is studied as the sole means for increasing the productivity of ultrasonic machining. Significant progress was made towards the solution of this problem by the Lefeldt Company in West Germany with the production of the Diatron type A ultrasonic machine tool. This machine is equipped with a vacuum pump which draws off the abrasive suspension through a central opening in the tool. The productivity of this machine is higher by a factor of 2-3, and accuracy does not depend on machining depth. A table is given showing the effect which such basic parameters as feed force, vibration amplitude and machining area have on machining efficiency during abrasive suspension removal from the machining zone. These data show that the rate of machining approaches

Card 1/3 UDC: 621.9.048.6.014-187

a certain value at a hole depth greater than 0.5 mm and does not vary up to a tool depth of 10 mm and more. By studying the relationship between machining rate and feed force at a constant amplitude, it was established that machining rate increases in proportion to the specific pressure with which the tool is fed into the workpiece surface. Under these conditions the proportionality factor is the same for tools with various areas. However, if the specific pressure is increased past a critical value, machining rate decreases. This shows that the critical feed force is independent of tool area. This is explained by the fact that the rate of machining decreases as a result of the presence of torsional instead of longitudinal vibrations at a critical feed force greater than 4 kg. Further studies were conducted to explain the nature of abrasive suspension removal from the machining zone. An experimental unit was set up with a powerful vibration system and higher efficiency. The model 4672 ultrasonic machine tool was used for this purpose. This machine is equipped with vacuum pumps for circulating the abrasive suspension. The test results are tabulated. A comparison of these data shows that productivity decreases and reaches zero as the feed force increases. This is explained by the fact that the abrasive is crushed as the feed force is increased. Although maximum productivity was observed at a critical feed force of 13.7 kg, productivity decreased with machining depth. Tests were conducted to determine the relationship between productivity and the rate of abrasive suspension replacement. Abrasive suspension removal was controlled by the amount of abrasive in solution. The results show that the rate of suspension replacement has a definite effect on productivity, and an even greater

ACC NR: AP6022884

effect on machining depth. Without removal, the rate of machining approaches zero. It was shown that in order to increase productivity further, it is necessary to increase the pulse force transmitted by the tool to the abrasive, force the abrasive suspension into the machining clearance and make other modification. Surface finish was studied with respect to suspension circulation and removal. Further improvements in ultrasonic machine tools are suggested such as automation and modification. Orig. art. has: 7 figures, 2 tables, 1 formula.

SUB CODE: 13/ SUBM DATE: None/ ORIG REF: 004/ OTHER REF: 003

Card 3/3

KAZANTSEV, V.I., inzh.

Electromagnetic method of preparing water to supply boilers.
Mont. i spets. rab. v stroi. 23 no.12:15-17 D '61.
(MIRA 15:2)

1. Trest Montazhtermoizdeliya.
(Feed-water purification)

KAZANTSEV, V. K.

USSR/Farm Animals - Swine. Q-5

Abs Jour : Ref Zhur - Biol., No 1, 1958, 2611

Author : V.K. Kazantsev
Inst :
Title : Experimental Use of Cobalt and Copper to Stimulate the Growth and Development of Piglets.

Orig Pub : Sb. nauchno-issled. rabot stud. Stavropol'sk. s-Kh. in-t, 1956, 4, 97-99

Abstract : An experimental group of young pigs at the age of 5 days, received a daily dose of micro-elements such as Cobalt chloride (0.3 milligrams) and copper sulphate (0.75 milligrams per 1 kilo of live weight). Both the experimental and control group of pigs were kept in similar conditions. Twenty days after the micro-elements had been added to the feed, the average live weight of each pig in the experimental group increased by 120 grams, in 30 days by 260 grams and in 40 days by 350 grams over the weight of a pig in the

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[illegible], [illegible], KAZANTSEV, V.M.

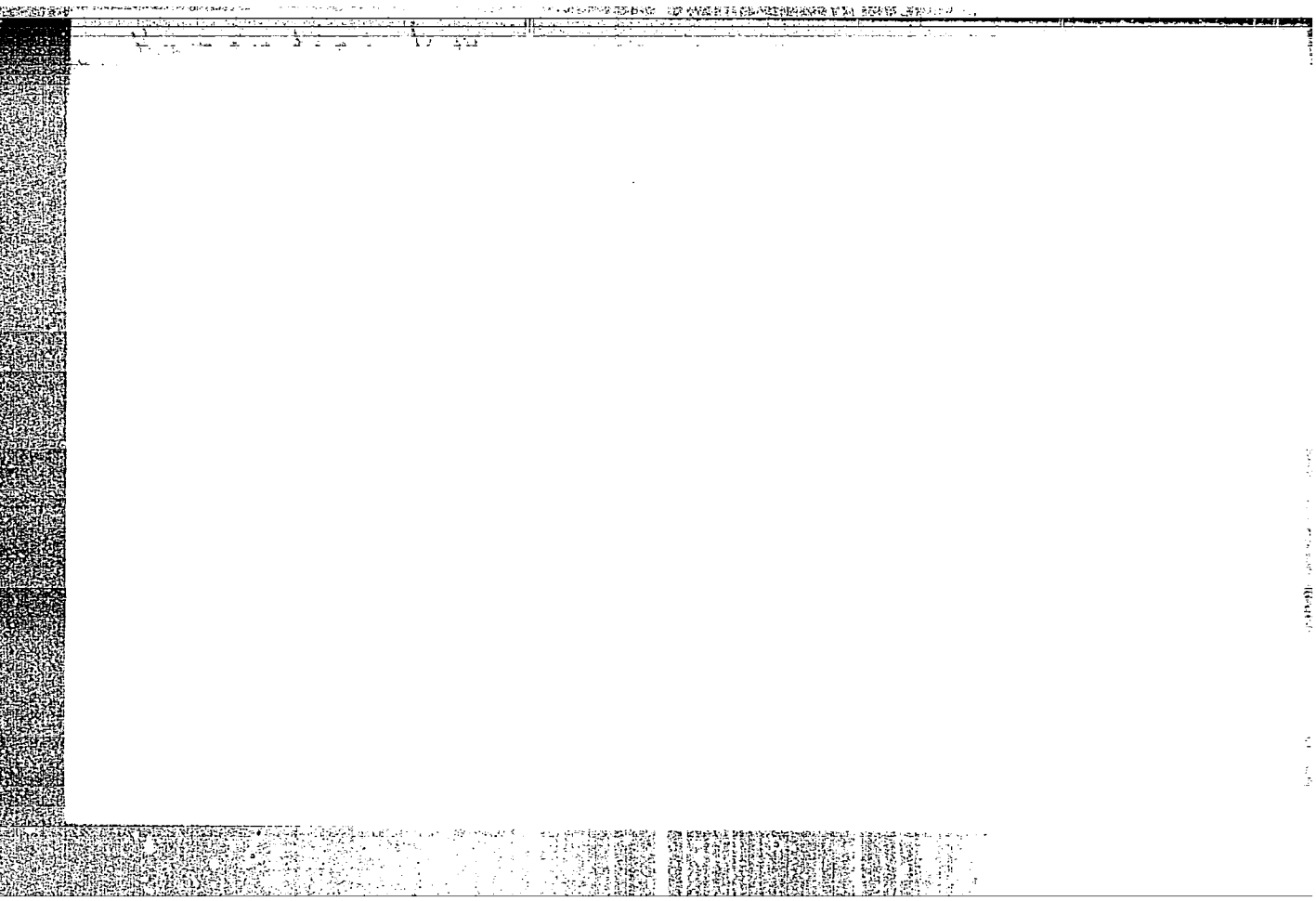
[illegible] for lowering sintering. Ugol' Ukr. 7 no.10:14 O '63. (MIRA 17:4)

KAZANTSEV, Vladimir Nikolayevich; SAL'NICHENKO, M.A., red.; NAZAROVSKIY, B.N., red.izd-va; SUKMANOVA, K.G., tekhn.red.

[Reduce the cost of vegetable growing] Udeshevit' proizvodstvo ovoshchei. Perm', Permskoe knizhnoe izd-vo, 1960. 20 p. (MIRA 14:6)

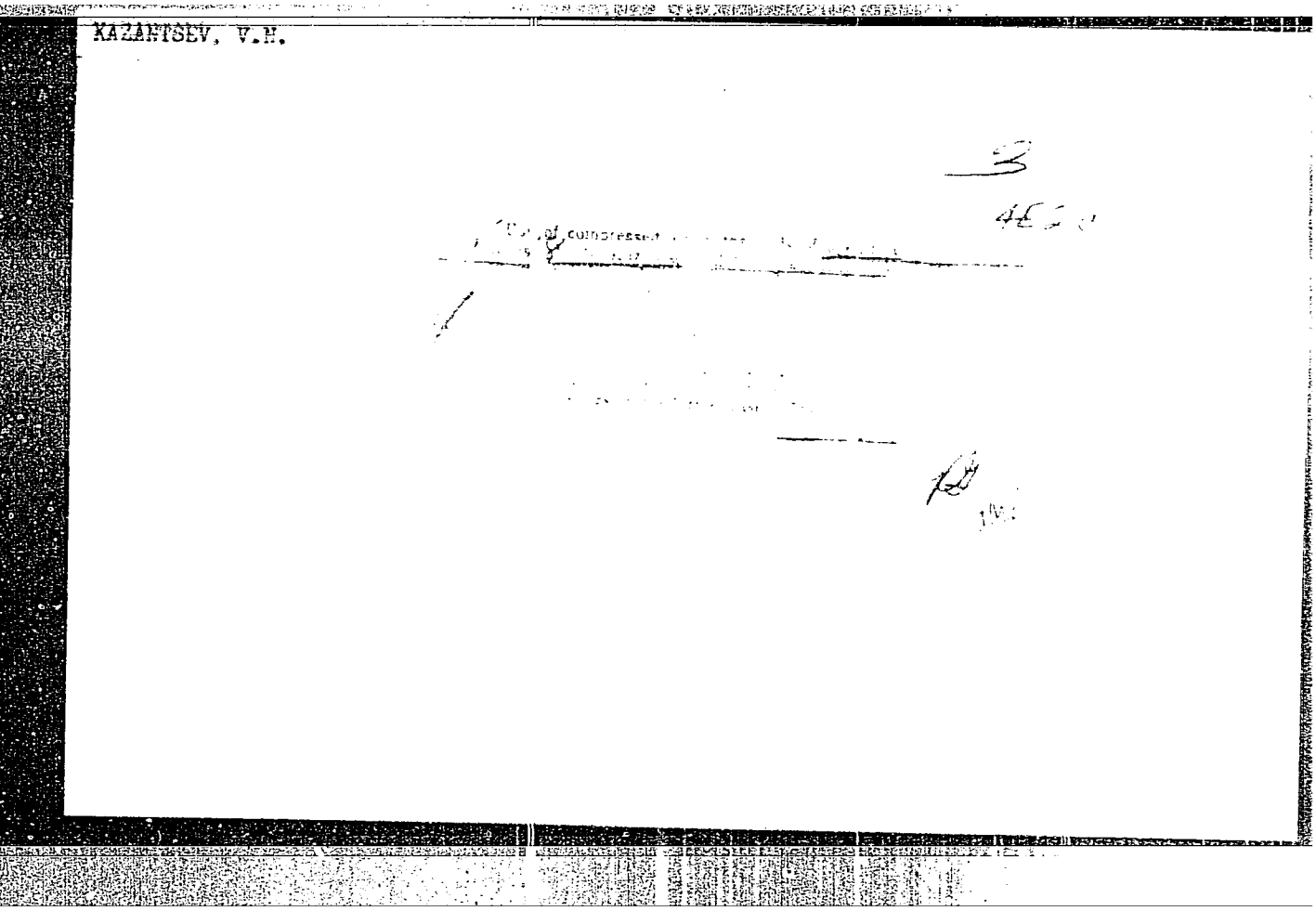
1. Metodist Doma politicheskogo prosveshcheniya pri Permskom obkome Kommunisticheskoy partii Sovetskogo Soyuza (for Sal'nichenko).
(Vegetable gardening)

KAZANTSEV V.N.



APPROVED FOR RELEASE: 06/13/2000 CIA-RDP86-00513R000721320015-0"

KAZANTSEV, V.N.



KAZANTSEV, V.N.

130-9-6/21

AUTHOR: Kazantsev, V.N. (Shift heat engineer of Open Hearth Shop.No.1)

TITLE: Blowing Out Dust from the Under-Checker Space. (Vyduvka pyli iz podnasadochnogo prostranstva).

PERIODICAL: Metallurg, 1957, Nr 9, pp.14-16 (USSR).

ABSTRACT: The under-checker passages of the gas regenerators of open-hearth furnaces in Nr 1 melting shop at the Kuznetsk Metallurgical Combine tend to get blocked with sooty matter from the gas producers. An experimental installation has been tested recently on one of the furnaces for blowing out the dust by jets of superheated steam conveyed by a 3-inch stainless steel tube. The procedure was found to be effective, especially if two Laval nozzles were provided per passage. The steam pipe must be away from the hottest zone and the method can be used for air regenerators also. There are 3 figures.

ASSOCIATION: Kuznetsk Metallurgical Combine. (Kuznetskiy metallurgicheskiy kombinat).

AVAILABLE: Library of Congress.

Card 1/1

AUTHOR: Kazantsev, V.N., Engineer SOV/133-58-6-9/33

TITLE: A Method of Decreasing Noise of Injectors of Open-hearth Furnaces (Ustraneniye shuma inzhektorov martenovskikh pechey)

PERIODICAL: Stal', 1958, Nr 6, pp 511 - 512 (USSR).

ABSTRACT: Heads of open-hearth furnaces in the Kuznetsk Metallurgical Combine were fitted with injectors operating on compressed air. The operation of injectors was accompanied with a strong noise which made working conditions in the melting shops difficult. A simple device - suction air conduit - suppressors were fitted which suppressed the noise without decreasing the efficiency of injectors. The design of the noise suppressor and the method of its fitting is outlined and illustrated.
There are 2 figures and 3 Soviet references.

ASSOCIATION: Kuznetskiy metallurgicheskiy kombinat (Kuznetsk Metallurgical Combine)

Card 1/1 1. Steel castings--Cooling

KALANTS.V, V.N., inzh.

Accelerating the open-hearth process by blowing air into the gas port. Stal' 20 no.6:504 Je '60. (MIA 13:8)

1. Kuznetskiy metallurgicheskiy kombinat.
(Open-hearth process)

ZIL'BERSHTEYN, M.B., inzh.; MOROKOV, P.K., inzh.; KAZANTSEV, V.N., inzh.

Utilizing the potentialities of operating open-hearth furnaces.
Stal' 20 no.11:984-988 N '60. (MIRA 13:10)
(Open-hearth furnaces)

KAZANTSEV, V.N.

Characteristics of heating and heat conditions of open-hearth furnaces. Metallurg 7 no.4:20-21 Ap '62. (MIRA 15:3)

1. Starshiy teplotekhnik martenovskogo tsekha No.1 Kuznetskogo metallurgicheskogo kombinata.
(Open-hearth furnaces--Design and construction)

KAGANTSEV, V.N., inzh.

Reasons for the pulsation of blast furnace air preheaters.
Stal' 24 no.5:411 My '64. (MIRA 17:12)

1. Kuznetskiy metallurgicheskiy kombinat.

KAZANTSEV, V.P., inzh.

Determining the length of time of manoeuvering movements and selecting the switch locomotives. Trudy MITT no.203:146-161 '65. (MIRA 18:6)

KAZANTSEV, V. S.

FEL'DSHTEYN, E.I., doktor tekhnicheskikh nauk; [illegible]BEDINSKIY, N.P., inzhener; TRUSH, I.V., inzhener; KAZANTSEV, V.S., inzhener.

Investigating the effect of carbide heterogeneity on the polishing of P18 steel. Metalloved.i obr.met. no.7:39-42 Jl '57. (MLRA 10:8)

1.Gor'kovskiy avtomobil'nyy zavod imeni V.M. Molotova.
(Steel--Metallography)
(Metals--Finishing)

KARDASHIN, L.I., inzh.; KAZANTSEV, V.S.

Effect of the adjustment on the quality of machining parts on centerless polishing machines. Vest.mash. 40 no.10:60-63 O '60. (MIRA 13:10)

(Grinding and polishing)

S/113/60/000/010/011/014
D270/D301

AUTHORS: Kardashin, L.I., and Kazantsev, V.S.

TITLE: Improving surface finish in the machining of gudgeon pins

PERIODICAL: Avtomobil'naya promyshlennost', no. 10, 1960, 35 - 38

TEXT: Stringent requirements are imposed on gudgeon pins for the GAZ-51 (GAZ-51) automobile. Tolerances for diameter, cylindricity and roundness must not exceed 0.0025 mm, whereas surface finish must be kept within class V 10 "b". The component is ground on 8 machines in an automatic line, while finish operations are performed on two type 386 [Abstractor's note: Soviet] or Cincinnati No. 5 centerless grinders. Quality and output depend entirely upon correct setting of these machines, but occasionally it is impossible to ensure the desired result due to insufficient knowledge of centerless grinding. A study of the effect of inidvidual elements of setting on the quality of the machined components was carried out on Cincinnati No. 5 grinders at the Moskovskiy avtozavod (Moscow

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Automobile Plant). E120C2K (E120S2K), E120CT3K (E120ST3K), EB150CT3K (EB150ST3K), EB180CT2K (EB180ST2K) and EB320CT2K (EB320ST2K) grinding wheels together with K5520SM2B regulating wheels were tested. The working capacity of the wheels was determined by their machining capacity and by surface finish of the machined components after 2 hours of operation. Surface finish was measured by a profilometer whereas the machining capacity was determined by the constancy of metal removed in one pass. The tests demonstrated that the EB320 ST2K, EB180ST2K and EB 150ST3K wheels gave good surface finish, but do not possess an adequate machining capacity. On the other hand, E120S2K wheels have a sufficient machining capacity, but do not give the desired surface finish. During the last operation, the grinding wheels should have only a polishing capacity. Their useful life between truing amounted to 50,000 - 60,000 components. Machining conditions are improved when there is a certain elasticity of the regulating wheel. The angle of inclination of the working wheel in vertical plane of a Cincinnati No. 5 grinder is opposite to the angle of inclination of the regulating wheel. The inclination of the working wheel improves machining: contact stresses in

the component are reduced, and this gives a better finish and greater accuracy. During tests the angle of working wheel was varied from 2.5 to 4° and that of the regulating wheel from 2 to 3°. Deterioration in finish was observed with smaller inclination of the working wheel or larger angle of the regulating wheel. The angle of inclination for the working wheel in the first machine (preciding the last operation) was 3.5°, whereas in the last grinder it was 3°. Inclination of the regulating wheels in both cases was 2°. A greater inclination results in lower speed of the component which impairs the quality of finish. Both wheels are given a hyperboloid shape to ensure full contact between component and wheel. This is achieved by slewing the truing devices in the horizontal plane by an angle equal to that in the vertical plane, and also by shifting the diamond tool from zero position to the right for regulating and to the left for working wheel by an amount, calculated in an equation. It was found that an increase in the speed of the working wheel improved the finish. Preliminary truing should be made with diamond impregnated tools, and final truing with a diamond. The working part of the supporting blade of the first grinder consisted

Improving surface finish in the ...

of accurately lapped rectangular carbide strips with 30° edge. The second grinder was provided with a textolite working blade and a flat top. The straightness, horizontal disposition and state of the working part of the above, as well as their position in relation to the centers height of the wheels have a great effect on finish. The results of a study of the effect of this height on finish are shown. Machining practice with Cincinnati No. 5 grinders revealed that, all other conditions being equal, lengthening of the contact between workpiece and wheels improves the finish due to the greater number of grains that take part in the work. As a rule, the length of contact is reduced after each truing due to various factors. This should be remedied by resetting the wheels with the use of a control shaft of the same diameter as the workpiece, but longer than the width of wheels. Due to the small wheel inclination, the line of contact after truing is easily restorted by cross tie bolts. The position of the guide plates has a great effect on the geometrical form and finish of the components. There are 3 figures and 2 tables.

ASSOCIATION: Gor'kovskiy avtozavod (Gor'kiy Automobile Plant)

13,2000

S/024/62/000/002/009/012
E140/E135

AUTHORS: Kazantsev, V.V., and Kashtanov, V.N. (Leningrad)

TITLE: On a reliability criterion for automatic control systems

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Energetika i avtomatika, no.2, 1962, 136-139

TEXT: The article seems to be devoted to a consideration of autopilot reliability considerations. Three types of system faults are distinguished; where the character of the transient process is changed, where the deviations are changed, and where the magnitudes of the overshoots or maxima of the coordinates are affected. For example, an autopilot fault which permits flight to continue at an altitude lower than that prescribed is a fault of the second type. In the analysis of the system, each element is assigned to the group corresponding to the type of system fault produced by its breakdown. The reliability of the system can be calculated on analogue computer models if the actual system is inaccessible for reliability tests.

Card 1/1 SUBMITTED: August 7, 1961

KAZANTSEV, V.V. (Leningrad); KASHTANOV, V.N. (Leningrad)

Concerning a certain criteria for evaluating the reliability of automatic control systems. Izv.AN SSSR.Otd.tekh.nauk.Energ.i avtom. no.2:136-139 Mr-Ap '62. (MIRA 15:4)
(Automatic control)

ACCESSION NO: AP4017631 S/0190/64/006/002/0219/0223

AUTHORS: Slonimskiy, G. L.; Musayelyan, I. N.; Kazantseva, V. V.

TITLE: The mechanical properties of polymer mixtures

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 2, 1964, 219-223

TOPIC TAGS: polymer, polymer mixture, polypropylene, polyisobutylene, crystalline polypropylene, amorphous polypropylene, stretch, deformation, two phase system, two phase colloidal system, mechanical property, isotactic polypropylene

ABSTRACT: The present study was conducted on mixtures of polypropylenes as such and with polyisobutylene. By consecutive fractionation of technical grade polypropylene an atactic amorphous polypropylene was obtained having a molecular weight of 25 700. This was mixed with isotactic crystalline polypropylene of a molecular weight of 347 000 in 1:3, 1:1, and 3:1 ratios. Mixtures of isotactic crystalline polypropylene with polyisobutylene of 96 500 molecular weight were also prepared in the same ratios. These mixtures were dissolved in decalin at 170-180C, followed by precipitation with acetone and drying in vacuum at 100C. From these samples films were prepared by pressing at 100 kg/cm^2 and at 200C. X-ray study and thermomechanical stretch deformation tests at various temperatures were performed. It was found

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ACCESSION NO: AP4017631

that with a shift in the ratios of the components from 1:3 to 3:1, one could observe a transition from an amorphous system filled with a crystalline component to a crystalline system containing an amorphous filler, representing a two-phase colloidal system. A superposition of three types of deformation which develop to various degrees, depending upon the composition as well as on the temperature, is suggested as an explanation for the observed relationship between ultimate stretch and temperature. Orig. art. has: 3 charts.

ASSOCIATION: Institut elementoorganicheskikh soedineniy AN SSSR (Institute of Elementoorganic Compounds AN SSSR)

SUBMITTED: 02Oct62 DATE ACQ: 23Mar64 ENCL: 00

SUB CODE: CH NO REF SOV: 004 OTHER: 000

Card 2/2

KAZANTSEV, V.V.; LADOKHIN, S.V.; LITVIN, V.A.; PANIUSHKIN, P.P.; UL'YANOV, V.L.

Service of a refractory lining in rotary kilns for the preparation of silicate melts for stone casting. Ogneupory 30 no.12:24-28 '65. (MIRA 18:12)

1. Institut problem lit'ya AN UkrSSR.

GUSEV, N.N.; KAZANTSEV, Ye.A.

Electric-abrasive machining of parts in the manufacture of instruments. Priborostroenie no.11:22-24 N '60. (MIRA 13:11)
(Electric metal cutting)

KAZANTSEV, Ye.A. (Moskva)

Bilateral adrenal hyperhephroma combined with fibrocavernous tuberculosis of the lungs and callous ulcer of the stomach. Arkh.pat. 18 no.3:91 '56 (MIRA 11:10)

1. Iz patologoanatomicheskogo otdeleniya Dubovskoy bol'nitsy Moskovskoy oblasti (glavnyy vrach S.I. Purisman).

(ADRENAL GLANDS, neoplasms
adenocarcinoma, with fibrocavernous pulm. tuberc. & callous ulcer of stomach (Rus))
(TUBERCULOSIS, PULMONARY, compl.
adrenal gland adenocarcinoma & callous peptic ulcer (Rus))
(ADENOCARCINAMA,
adrenal glands, with pulm. tuberc. & callous peptic ulcer (Rus))
(PEPTIC ULCER
callous, with adenocarcinoma of adrenal glands & pulm. tuberc (Rus))

KAZANTSEV, Ye.A.

Calculus of the thyroid gland. Probl.endok. i gorm. 4 no.1:110-111 Ja-F'58 (MIRA 11:5)

1. Iz patologoanatomicheskogo otdeleniya Dubovskoy bol'nitsy (glavnyy vrach - kand.med.nauk S.I. Prisman) Moskovskoy oblasti.
(THYROID GLAND, calculi.
(Rus))

KAZANTSEV, E. A.

EXCERPTA MEDICA Sec 16 Vol 7/3 Cancer Mar 59

1166. **Metastasis of cancer of the urinary bladder into the heart (Russian text)** KAZANTSEV E. A. *Arkh. Patol.* 1958, 20/8 (64–66)
Report of a case. The metastasis was localized in the anterior wall of the right ventricle, was large, but had not caused cardiovascular disturbances. Numerous metastases in other organs were present as well.

KAZANTSEV, Ye.A.

Case of spontaneous rupture of the stomach. Khirurgiia 35 no.12:87-88 D '59. (MIRA 13:6)

1. Iz patologoanatomicheskogo otdeleniya Dubovskoy bol'nitsy (glavnyy vrach - kand.med.nauk S.I. Purisman) Moskovskoy oblasti.

(STOMACH diseases)

S/149/62/000/006/003/008
A006/A101

AUTHOR: Kazantsev, Ye. I.

TITLE: Investigating the rate of equilibrium reaction in uranium (VI) sorption by cationites

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Tsvetnaya metallurgiya, no. 5, 1962, 106 - 112

TEXT: For the purpose of gathering data on exchange kinetics of uranium (VI) from solutions with different pH values, the authors studied the rate of equilibrium reaction in sorption of uranium (VI) with cationites of domestic production: КУ-2 (KU-2) СВД-3 (SVD-3) СБС-1 (SBS-1) СБС-3 (SBS-3) КУ-1 (KU-1) СГ-1 (SG-1) and КБ-4П-2 (KB-4P-2) at 1 - 6, 18 and 55°C. A number of 10 to 15 batches, 0.1 g each, were placed in test tubes with ground stoppers. To allow the resin to swell, 1 ml water was filled into each tube and they were thus kept for 24 hours. Then 20 ml ≈0.1 n. solution of uranyl nitrate was added and the mixture was stirred in a thermostat at constant (± 1°C) temperature. The uranium content in samples, taken off at different intervals, was determined by the weight method. Kinetic curves were plotted with time along the abscissa axis and the degree of the equilibrium attained plotted along the ordinate axis, i.e.

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Investigating the rate of equilibrium reaction in...

the ratio of the number of cations absorbed by the time t to the equilibrium amount. The resins investigated can be arranged in the following order of increasing rate of the equilibrium reaction, i.e., the exchange of a cationite hydrogen to a uranium (VI) ion:

$$KB\text{-}4P\text{-}2 < SG\text{-}1 < KU\text{-}1 < SBS\text{-}1 < SBS\text{-}3 \leqslant KU\text{-}2 \leqslant SDV\text{-}3$$

The diffusion of uranium (VI) ions inside the resin grain was found to be the decisive stage of the exchange process. It is shown that the adsorption of uranium (VI) ions is accelerated at higher temperature and increased swelling ability of the resins and at decreasing pH of the solution and cationite grain size. The mean coefficients of uranium (VI) internal diffusion and the activation energy of the exchange are calculated. These values depend on the same factors and increase according to the degree of resin filling with uranium. The investigated ion-exchange reactions were found to obey the Arrhenius equation. There are 4 figures and 3 tables.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural Polytechnic Institute)

SUBMITTED: June 26, 1961

Card 2/2

KAZANTSEV, Ye.I.; KUDUSOV, V.A.

Wash-out of thorium from strongly basic anion exchangers.
Radiokhimiia 5 no.2:231-236 '63. (MIRA 16:10)

KAZHNTSEV, Ye.I.

BEL'GOL'SKIY, Boris Petrovich; KRUKSAL', Mark Semenovich; STAROSEL'SKIY, Anatoliy Lazarevich; KAZANTSEV, Ye.I., redaktor; ANDREYEV, S.P., tekhnicheskiy redaktor [redacted]

[Senior welders' work experience with pit furnaces] Opyt raboty starshikh svarshchikov nagrevatel'nykh kolodtsev. Khar'kov, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi tsvetnoi metallurgii, 1954. 48 p. (MLRA 8:7)

(Welding) (Metallurgical furnaces)

SOV/124-57-3-3248

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 3, p 88 (USSR)

AUTHOR: Kazantsev, Ye. I.

TITLE: An Investigation of a Free Air Jet Introduced Into a Submerged Region (Issledovaniye svobodnoy zatoplennoy strui)

PERIODICAL: Nauch. tr. Dnepropetr. metallurg. in-ta, 1954, Nr 31, pp 33-52

ABSTRACT: A presentation of the results of an experimental investigation of a free jet of air introduced into a submerged region through a nozzle with a diameter of 20.5 mm. The results obtained are compared with the theoretical and experimental results of other authors. Empirical formulas are proposed for the computation of the velocity profile and the calculation of the axial velocity. On the basis of the results of experiments performed, the author concludes that the magnitude of the momentum diminishes along the direction of the jet, a conclusion which is in contradiction with all known experimental data on free jets [Abramovich, G. N. Turbulentnyye svobodnyye strui zhidkostey i gazov (Free Turbulent Jetsof Liquids and Gases). Gosenergoizdat, 1948].

Card 1/1

M. V. Krasnoglyadova

AUTHORS: Kazantsev, E. I. and Strelets, M. N., Candidates of Technical Sciences., Dotsents. 372

TITLE: The temperature distribution in an ingot during heating in regenerative soaking pits. (raspredeleniye temperatur v slitke pri nagreve v regernerativnykh kolodtsakh).

PERIODICAL: "Stal'" (Steel), 1957, No.4, pp.358-361 (U.S.S.R.)

ABSTRACT: An investigation of the heating process of ingots in regenerative soaking pits was carried out in one of the Southern works. The experimental ingot from mild rimming steel, supplied with thermocouples (dimensions of ingot and the distribution of thermocouples is shown in Fig.1) was heated in a soaking pit (3100 mm long, 2000 mm wide and 3000 mm deep) supplied with 4 regenerators (2 for gas and 2 for air) and fired with a mixture of blast furnace and coke oven gas. The position of the ingot in the pit is shown in fig.2. The temperature distribution in the ingot is shown in Fig.4. It was found that in soaking pits investigated, the heating of ingots was highly assymmetrical causing large temperature gradients across the ingot. The final temperature reached on the surface was 1360-1370°C causing localised melting. It is recommended to lower the temperature in pits during the final stage of heating to 1300-1320°C, as

The temperature distribution in an ingot during heating in regenerative soaking pits. (Cont.)

this will prevent melting and will decrease the final temperature gradient in ingots to approximately 50-60°C instead of observed 90-100°C. There is 1 table, 6 diagrams and 2 Russian references.

KAZANTSEV, Ye. I.

137-58-2-2854

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 93 (USSR)

AUTHORS: Kazantsev, Ye. I., Strelets, M.N.

TITLE: A Study of the Ingot-heating Quality of Regenerative Soaking Pits (Issledovaniye kachestva nagreva slitkov v regenerativnykh nagrevatel'nykh kolodtsakh)

PERIODICAL: Tr. Donetsk. industr. in-ta, 1957, Vol 19, pp 83-96

ABSTRACT: A study was made of the heating of 6.2-ton rimmed-steel ingots ($\frac{640 \times 670}{680 \times 740}$ x 2300 mm) in 3100 x 2000 mm cells 3000 mm deep, the capacity of each cell being 6 ingots. Every cell was equipped with 4 regenerators (2 for heating air, 2 for heating gas). The fuel used was a combination of blast-furnace and coke-oven gases. The pits had a molten-state slag-removal system. To measure ingot temperatures chromel-alumel thermocouples were used; two were placed at the ends of the ingots (one on top and one on the bottom) and six on the surface of the different faces. Measured were: 1) the consumption of blast-furnace and coke-oven gases and of air; 2) the temperature of the chamber - by means of an optical thermometer aimed at the interior wall of the cell;

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137-58-2-2854

A Study of the Ingot-heating Quality of Regenerative Soaking Pits

3) the temperature of the gases in the vicinity of the test ingot and in the space above the regenerator; 4) the furnace temperature - by means of a thermocouple installed at the center of the cover; 5) the temperature on the surface of the faces and at the center of the ingot. The experimental findings are graphically represented as functions of the soaking time of an initially cold ingot amid other cold ingots (6 ingots per cell). As a result of the tests, diagrams were plotted of the cross-sectional temperature distribution within the ingot.

1. Ingots—Heating—Processes D.M.

Card 2/2

PUSHKAREV, V.V., kand.khim.nauk; BAGRETSOV, V.F., kand.khim.nauk; KAZANTSEV, Ye.I., inzh.

Protecting natural waters from contamination with radioactive substances; some comments on the article by A.N.Marei. Gig. i san. 22 no.11:73-74 N '57. (MIRA 11:1)

1. Iz Ural'skogo politekhnicheskogo instituta imeni S.M.Kirova.
(WATER--POLLUTION) (RADIOISOTOPES)

AUTHOR: Kazantsev, Ye.I. and Chaptsov, R.P. 3-58-6-20/34

TITLE: Students Help Industry (Studenty - Proizvodstvu)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, Nr 6, pp 77 - 81 (USSR)

ABSTRACT: Many years ago the Urals Polytechnical Institute began to examine the question of the students' proper shop training. It was the instructors intention to familiarize the student with the enterprise in which he is likely to work and to train him to give actual help to the enterprises while he is still studying. In 1952, a conference of the Studencheskoye nauchno-tekhnicheskoye obshchestvo (Students Scientific-Technical Society) issued an appeal to all students to carry out at least one project during their training period that would be of assistance to production. At the beginning of the 1957/58 school year it was decided to ascertain, in cooperation with the BRIZ chiefs of the industrial enterprises of Sverdlovsk, which questions the plants are particularly interested in. Under the supervision of the Candidate of Technical Sciences, Dotsent O.A. Ganago, instructor of the Chair for Treating Metals Under Pressure, students of the Metallurgical Faculty carried out several projects which were important from a

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Students Help Industry

practical point of view. Thus, the 4th-course students designed a manipulator for a horizontal forging machine making the blanks for bearing casings at the Sverdlovskiy sharikopodshipnikovyy zavod (Sverdlovsk Ball Bearing Plant). The author enumerates a number of other works carried out by students for the enterprises. At present the institute maintains connections with the Verkh-Isetskiy metallurgicheskiy zavod, (Verkh-Isetsk Metallurgical Plant), Instrumental'nyy zavod (Tool Factory), Zavod bashennykh kranov (Tower Crane Plant), Uralmashzavod, Uralkhimmash, Uralelektroapparat, and others. Dealing with the deficiencies in the students' coordination with industrial enterprises, the author points out that the students work load prevents them from developing relations. Some chair workers and directors of many enterprises (even the Ural'skiy zavod tyazhelogo mashinostroyeniya - Ural Heavy Equipment Plant) are not inclined to become engaged in developing this coordination. Among other recommendations made by the author, there is one to the effect that the pre-diploma practical training be extended to 8-12 months as against the present 1½ - 2 months. This will enable the students to work in various capacities at the factories, and will help them to gather material for the graduating thesis.

Students Help Industry

3-58-6-20/34

ASSOCIATION: Ural'skiy politekhnicheskiy institut imeni S. M. Kirova (The Urals Polytechnical Institute imeni S. M. Kirov)

Card 3/3

24431

21.4200

S/080/61/034/007/005/016
D223/D305

AUTHORS: Kazantsev, Ye.I., and Perevozov, V.N.

TITLE: Washing of thorium from sulphocationites

PERIODICAL: Zhurnal prikladnoy khimii, v. 34, no. 7, 1961, 1448 - 1456

TEXT: The practical investigation of the sorption of thorium and also its separation from other elements necessarily includes the study of solutions capable of washing thorium ions. The present work aimed at determining a solution which will rapidly, and with minimum volume almost completely remove thorium from cationites. The leaching abilities of various solutions of neutral and acid salts and some acids were tried on the sulphocationites KV-1 and KV-2 column. These high acid cationites with particle sizes 0.1 - 0.25 mm had characteristics given in Table 1.

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24431
S/080/61/034/007/005/016
D223/D305

Washing of thorium ...

Table 1. Cationite characteristics.

Legend: 1 - ionite; 2 - ionogenetic groups; 3 - the volume of 1 gr. resin in N-form in water (mls.); 4 - volume capacity mgr. - equivalent/gr.; 5 - per 0.1 N NaOH sol.; 6 - per sulpho-groups.

ТАБЛИЦА 1

Характеристика катионитов

(1) Марка ионита	(2) Ионогенные группы	(3) Объем 1 г смолы в Н-форме, набухшей в воде (мл)	(4) Обменная емкость (мг-экв./г)	
			(5) по 0.1 н. раствору NaOH	(6) по сульфогруппам *
КУ-2 . .	$-SO_3H$	2.75	4.92	4.92
КУ-1 . .	$-SO_3H$, $-OH$	2.80	4.85	2.20

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Washing of thorium ...

From data obtained it could be seen that the washing of thorium depends on the ionite and ability of anions of the reagents to form with thorium complex compounds of varying stability. Nitrate ions form, in the concentrations investigated, such complexes with thorium, and hence amm. nitrate solution is an effective washer of Th. The anions of sulphuric and especially oxalic and citric acid form stable complex compounds with Th and the solution of their salts is an even better washing agent. The authors examine why amm. nitrate and sulphate remove less of thorium than their mixture with respective acids. A.I. Zhukov and I.V. Merkov (Ref. 10: Izv. vuzov. Khim. i. khim, tekhn. 2, 1961) showed that ammonium ions have greater extracting power than hydrogen ions in washing Th, and they suggested that Th is sorbed by resin in the form of hydroxy-complexes. The diffusion of thorium was thus studied for different particle sizes of resin. The results show that both particle size and contact time effect the washing of thorium, but contact time is pronounced only for the first 250 mls. used and after that the washing is slow. The explanation is that the initial portions of

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Washing of thorium ...

desorbants are effective due to the diffusion of Th from the resin, while the slow rate of leaching small residual Th is probably decomposition of chemical compound between Th and resin. The increase of washing with fall in pH is explained by the acid decomposition of sorbed hydroxycomplexes of thorium, (Ref. 11: B.N. Laskorin, Atomnaya energiya, 9, 4, 1960). The internal complex formations between Th ions and resin were examined as described in literature (Ref. 16: V.V. Fomin, Usp. Khim. 24, 8, 1955) which in essence is the sorption of ion under investigation with the presence of a complex forming agent and without one. The complex forming agent used was sodium benzosulphurate. The results showed that the presence of a complexing agent for all pH values investigated lowers the quantity of thorium absorbed by cationite, compared to the solution of $NaNO_3$ of similar concentration. There are 4 figures, 3 tables and 17 references: 12 Soviet-bloc and 5 non-Soviet-bloc. The references to the English-language publications read as follows: F.W.E. Strelow, Analyt. Chem., 31, 7, 1201, 1959; W.E. Brown, W. Rieman, J. Am. Chem. Soc., 74, 1278, 1952; E.L. Zebroski, H.W.

Card 4/5

Washing of thorium ...

Alter, and F.K. Heuman, J. Am. Chem. Soc., 73, 5646, 1951; I. Schubert, J. Phys. coll. Chem., 52, 2, 340, 1948.

ASSOCIATION: Ural'skiy politekhnicheskiy institut imeni S.M. Kirova (Ural Polytechnic Institute imeni S.M. Kirov)

SUBMITTED: January 27, 1961

X

Card 5/5

KAZANTSEV, Ye.I.; KONDRATOV, P.I.; KALINICHENKO, B.S.; GEL'MAN, A.D.

Study of the elution of neptunium from the anion exchanger AM. Radiokhimia 4 no.1:81-84 '62. (MIRA 15:4)
(Neptunium) (Ion exchange resins)

KAZANTSEV, Ye.I.; ZEMLYANOY, N.G.

Comparing methods of determining the heat absorption of open-hearth furnace baths. Izv. vys. ucheb. zav.; chern. met. 5 no.3:169-178 '62. (MIRA 15:5)

1. Donetskiy politekhnicheskiy institut.
(Open-hearth furnaces) (Heat--Radiation and absorption)

ZHUKOV, A.I.; KAZANTSEV, L.Ya.I.; ONOSOV, V.N.

Sorption of thorium by cation exchangers. Zhur.neorg.khim. 7 no.4:915-920 Ap '62. (MIRA 15:4)

1. Ural'skiy politekhnicheskiy institut im. S.M.Kirova.
(Thorium) (Ion exchange resins)

ZHUKOV, A.I.; ONOSOV, V.N.; KAZANTSEV, Ye.I.

Composition of thorium ions sorbed by cation exchangers. Zhur.-neorg.khim. 7 no.4:921-925 Ap '62. (MIRA 15:4)

1. Ural'skiy politekhnicheskiy institut im. S.M.Kirova.
(Thorium compounds) (Ion exchange resins)

ZHUKOV, A.I.; KHIL'KO, M.M.; SHKLYAR, M.S.; KAZANTSEV, Ya.I. Prinimali uchastiye: BLASHCHUK, N.M., inzh.; YARMYSH, V.A., inzh.; PARKHOMENKO, D.M., inzh.; BULI, V.G., inzh.; BIDENKO, R.V., inzh.; PASIKOV, N.V., inzh.; ZEMLYANOY, N.G., inzh.; TARASENKO, A.A., inzh.

Firing open-hearth furnaces with a mixture of cold coke and natural gases. Stal' 21 no.12:1068-1070 D '61. (MIRA 14:12)

(Open-hearth furnaces--Equipment and supplies)
(Gas as fuel)

KAZANTSEV, Ye.I.

Studying the rate of the equilibrium reaction during the sorption of uranium VI by cathionites. Izv. vys. ucheb. zav.; tsvet. met. 5 no.5: 106-112 '62. (MIRA 15:10)

1. Ural'skiy politekhnicheskiy institut.
(Uranium) (Ion exchange)

KAZANTSEV, Ye.I.

Rate of the establishment of equilibrium in the sorption of thorium by cation exchangers. Trudy Ural.politekh.inst.no.121:55-62 '62. (MIRA 16:5)

(Thorium compounds) (Ion exchange resins) (Chemical reaction, Rate of).

KAZANTSEV, Ye.I.

Chemical stability of anion exchangers in nitric acid solutions. Zhur.prikl.khim. 35 no.11:2567-2569 N '62. (MIRA 15:12)
(Anion exchange) (Nitric acid)

L 9908-63 EPF(n)-2/EWP(q)/EWT(m)/BDS--AFFTC/SSD--WW/JD/JG
ACCESSION NR: AP3000183 S/0080/63/036/004/0743/0750

AUTHOR: Zhukov, A. I.; Kazantsev, Ye. I.; Yakovlev, A. V. 60 59

TITLE: Separation of thorium and uranium (VI) on KU-2 ion-exchange resin 27 27

SOURCE: Zhurnal prikladnoy khimii, v. 36, no. 4, 1963, 743-750

TOPIC TAGS: uranium(VI), thorium, separation, ion exchange, KU-2, nitric acid, ammonium nitrate, ion-exchange resin

TEXT: The columnar separation of U(VI) from Th by use of KU-2 ion-exchange resin (exchange capacity, 4.93 mg-eq/g) has been studied. It was found that complete or practically complete separation is feasible in a single cycle and at a high Th load of the column. In the experiment sorption was carried out from solutions of thorium nitrate and UO sub 2(NO sub 3) sub 2, with pH suitably adjusted by HNO sub 3 or ammonia. Elution of U was carried out with NH sub 4 NO sub 3 or HNO sub 3 solutions. The effect of the pH, temperature, [Th], [NH sub 4], and [UO sup 2+ sub 2] of the solution on the resin's

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L 9908-63
ACCESSION NR: AP3000183

dynamic exchange capacity with respect to Th, as well as the effect of the eluent's pH and [NH sub 4 NO sub 3] or [HNO sub 3], were determined. On the basis of preliminary tests, a temperature of 18C and a [Th] of 0.025 M were chosen for further work. Separation by use of HNO sub 3 proved to be most satisfactory: U and Th are sorbed from 0.5N HNO sub 3 (pH, 2.4) and the column is loaded to 62.5% of its Th capacity; pure 0.5N HNO sub 3 is then used to elute U. In the case of NH sub 4 NO sub 3, sorption is effected from 1N NH sub 4 NO sub 3 solution. The pH must be precisely maintained at 2.4 to prevent a drop in yield. Elution with 1N NH sub 4 NO sub 3 is slower than with HNO sub 3; however, reagent consumption is lower for NH sub 4 NO sub 3. The column can be loaded to 78% of capacity, and a 99.4% yield of U(VI) is possible. Choice of the reagent will be determined by the particular purpose of the separation. Orig. art. has: 5 figures and 2 tables.

ASSOCIATION: Ural'skiy politekhnicheskiy institut imeni S. M. Kirova (Ural Polytechnic Institute)

SUBMITTED: 10Jun61 DATE ACQ: 12Jun63 ENCL: 00
SUB CODE: 00 NO REF SOV: 006 OTHER: 000
Card 2/2

KAZANTSEV, Ye.I.; DENISOV, A.N.

Sorption of some elements by carboxyl cation exchangers. Zhur. neorg.khim. 8 no.9:2198-2205 S '63. (MIRA 16:10)

1. Ural'skiy politekhnicheskiy institut imeni Kirova.

KAZANTSEV, Yevgeniy Ivanovich. Prinimali uchastiye: ZEMLYANYY, N.G., inzh.; KATSEN, L.G., kand. tekhn. nauk; SEMIKIN, I.D., prof., retsenzent; STEPANOV, Ye.S., red.; SHKLOVSKAYA, I.Yu., red.izd-va; KOROVINA, N.A., tekhn.red.

[Industrial furnaces; handbook for their calculation and design] Promyshlennye pechi; spravochnoe rukovodstvo dlia raschetov i proektirovaniia. Moskva, Izd-vo "Metallurgiia," 1964. 451 p. (MIRA 17:4)

1. Dnepropetrovskiy metallurgicheskiy institut (for Semikin).

KAZANTSEV, Ye.I.; KOGADEYEV, A.A.; SHKLYAR, M.S.; FOMINA, Z.M.

Redesigning blooming mill regenerator soaking pits with an extended working chamber. Stal' 24 no.1:82-84 Ja '64. (MIRA 17:2)

1. Donetskiy politekhnicheskiy institut i Makeyevskiy metallurgicheskiy zavod.

KAZANTSEV, Ye.I.

Thermophysical properties and the specific time length of ingot heating. Izv. vys. ucheb. zav.; chern. met. 7 no.9:172-178 '64.
(MIRA 17:6)

1. Donetskiy politekhnicheskiy institut.

KAZANTSEV, Ye.I., kand. tekhn. nauk

Duration of heating of ingots in soaking pits at metallurgical plants. Met. i gornorud. prom. no.3:37-39 My-Je '64.
(MIRA 17:10)

KA[illegible], Yu.I.; PANCHENKO, A.A.; SAPOGOV, N.V.; TROFIMOVA, L.I.

Sorption of metal ions by carboxyl base exchanging compounds in the form of hydrogen. Izv. vys. ucheb. zav.; tsvet. met. 8 no.5:43-48 '65. (MIRA 18:10)

1. Ural'skiy politekhnicheskiy institut.

ZHUKOV, A.I.; KAZANTSEV, Ye.I.; [illegible], V.I.

Separation of thorium and uranium (VI) on AV-1 resin. Zhur. prikl. khim. 38 no.1:43-47 Ja '65. (MIRA 18:3)

1. Ural'skiy politekhnicheskiy institut imeni Kirova.

TOPIC TAGS: column chromatography, anion exchange resin, [illegible]

KAZANTSEV, Ya.I.; ZHUKOV, A.I.; KOGADEYEV, A.A.; SHKLYAR, M.S.; GRILER, G.Ya.

Operating regenerative soaking pits heated by cold gas. Stal' 25 no.3:274-276 Mr '65. (MIRA 18:4)

1. Donetskiy politekhnicheskiy institut i Makeyevskiy metallurgicheskiy zavod.

KAZANTSEV, Ye.I.; KOROBEYNIKOV, V.L.; KUDUSOV, V.A.

Sorption of ions of certain metals on AV-17 anion exchangers from nitric acid solutions. Zhur. prikl. khim. 38 no.5:1143-1146 My '65. (MIRA 18:11)

1. Ural'skiy politekhnicheskiy institut imeni S.M. Kirova.

ACC NR: AP6007906 SOURCE CODE: UR/0149/66/000/001/0059/0061

AUTHOR: Kazantsev, Ye. I.; Davletshin, A. A.

ORG: Ural Polytechnic Institute (Ural'skiy politekhnicheskiy institut)

TITLE: Study of the anion-exchange recovery, separation and purification of platinummetals from hydrochloric acid solutions

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 1, 1966, 59-61

TOPIC TAGS: metal extracting, metal purification, platinum, palladium, rhodium, iridium, anion, ion exchange, hydrochloric acid, anion exchange resin, AV-17 anion exchange resin, AMP anion exchange resin, AN-31 anion exchange resin, EDE-10P anion exchange resin, AN-2F anion exchange resin, AN-22 anion exchange resin

ABSTRACT: The aim of this study was to investigate the effect of HCl concentration and other factors on the sorption of the ions of Pt, Ir, Pd and Rh by the anion exchangers AV-17, AMP, AN-31, EDE-10P, AN-2F and AN-22 (0.25-0.5 mm fraction in Cl- form at room temperature). (The Russian original is actually a precis of the article itself and the interested readers may "upon request receive a copy from the Institute's library.") The solutions were prepared by dissolving Pt and Pd in aqua regia with their conversion to HCl form and by electrolytically dissolving Ir and Rh. Small amounts of the platinum metals were determined by colorimetry and large amounts, by

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ACC NR: AP6007906

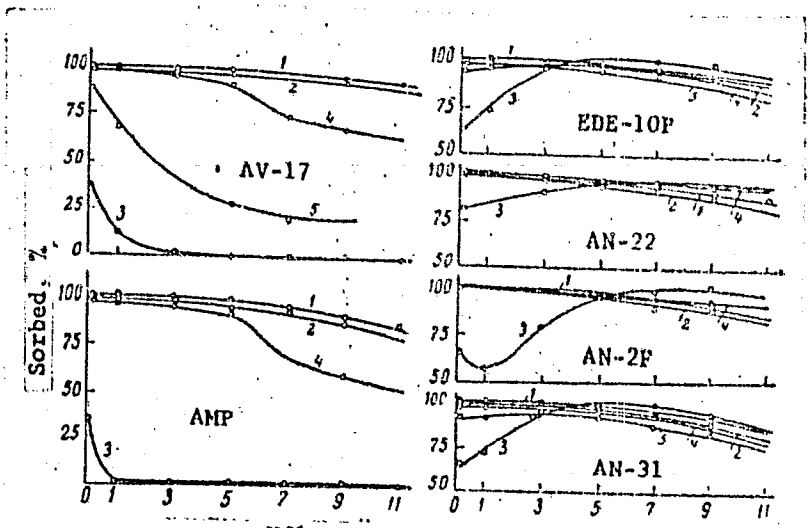

Fig. 1. Effect of HCl concentration on the sorbability of metal ions by various anion exchangers. 1 - Pt (IV); 2 - Pd (II); 3 - Rh (III); 4 - Ir (IV); 5 - Ir (III)

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gravimetry. The base metals were determined by complexometry. Tests of sorption by various anion exchangers (Fig. 1) showed that Pt^{4+} from 0.1-3 N solutions of HCl are virtually entirely sorbed by all the resins, and best by the AV-17, as are Pd^{2+} at a HCl concentration of 0.1-0.3 N; the sorption of Rh from weak acid solutions is worse and in the case of the anion exchangers AV-17 and AMP, non-existent. On the other hand, the anion exchangers EDE-10P, AN-2F, AN-22 and AN-31 sorb Rh virtually entirely from 4-7 N solutions of HCl. Ir (IV) is sorbed from 0.1-3 N solutions of HCl in the same way as Pt and Pd, while Ir (III) is fairly satisfactorily sorbed only by the resins EDE-10P and AN-31. These experiments demonstrate the feasibility of the group recovery of platinum metals from 0.1 - 3 N HCl solutions by means of EDE-10P and AN-2F anion exchangers, with an attendant partial purification (removal of base metals). Anion exchangers AV-17 and AMP may, on using 3-5 N HCl solutions, be used to partially separate Pt, Pd and Ir from Rh. Experiments with industrial-scale solutions further established that the EDE-10P anion exchanger recovers virtually the entire amount of platinum metals from the mother liquor of platinum refining and about 50-90% from mother liquors containing 1-10 mg/liter platinum metals and 1-2 mg/liter base metals. Orig. art. has: 4 figures.

SUB CODE: 20, 07, 11/ SUBM DATE: 14Jul64/

EWT(m)/EWP(j) DS/WW/RM

ACC NR: AP6030901 (N) SOURCE CODE: UR/0080/66/039/008/1793/1798

AUTHOR: Kamantsev, Ye. I.; Sapogov, N. V.

ORG: Ural Polytechnic Institute imeni S. M. Kirov (Ural'skiy politekhnicheskiy institut)

TITLE: Sorption of certain metal ions by phosphorylated cellulose

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 8, 1966, 1793-1798

TOPIC TAGS: sorption, cation, ion exchange, cellulose plastic

ABSTRACT: The sorption of various metal ions from nitric acid solutions was studied at 16-18°C, using a phosphorylated cellulose cation exchanger. The latter is shown to sorb ions of bismuth, tin (II), iron (III), thorium, aluminum and beryllium from their nitric acid solutions in amounts exceeding the exchange capacity, and ions of cerium (III), copper, nickel and magnesium in amounts comparable to the exchange capacity of the cation exchanger. It was found that the high sorbability of Bi, Fe, Sn(II), Th, Al and Be ions from solutions with HNO_3 concentrations less than 0.5-1 N is due to their sorption in the form of hydroxo complexes. The sorbability values obtained for the metal ions are best accounted for by assuming that they sorbed in the form of the respective complexes $Th[(OH)_3Th]_n^{(4+n)}$ and $Th[(OH)_4Th]_n^{4+}$, $Bi[(OH)_3Bi]_n^{3+}$, $Fe[(OH)_2Fe]_n^{(3+n)+}$ and $Fe[(OH)_3Fe]_n^{3+}$, $Sn[(OH)_2Sn]_n^{2+}$, $Al[(OH)_3Al]_n^{2+}$ and $Be[(OH)_2Be]_n^{2+}$. Thorium ions are sorbed from 0.5-3 N HNO_3 in the form of the complexes $Th(NO_3)_2^{2+}$ and

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$Th(NO_3)_3^+$. The sorption of ions by phosphorylated cellulose from 0.5-2 N HNO_3 solutions increases with increasing capacity of the ions to form sparingly soluble or stable phosphate complexes with the phosphate groups of the cation exchanger. The use of phosphorylated cellulose is recommended for removing Bi, Sn(II), Fe, Al and Be ions from ions of other metals. Orig. art. has: 4 figures and 1 table.

SUB CODE: 07/ SUBM DATE: 14Jul64/ ORIG REF: 013/ OTH REF: 006

Card 2/2

VEDERNIKOV, V.A.; KAZANTSEV, Yu.M.; KORNILOV, A.D.; KHILKOV, V.A.

Negative serological reaction in patients with syphilis treated with bicillin-1. Vest.derm.i ven. 34 no.6:42-43 '60.
(MIRA 13:12)

1. Iz kafedry kozhnykh i venericheskikh bolezney (zav. - prof. V.A. Vedernikov) Arkhangel'skogo meditsinskogo instituta.
(SYPHILIS) (PENICILLIN)

AUTHOR KAZANTSEV Yu. N.

TITLE Calculation of symmetrical transitive devides in waveguides of circular section for the waves of type H_{0n}. PA - 2571

(Raschet simmetrichnykh perekhodnykh ustroystv v volnovode kruglogo secheniya dlya voln tipa H_{0n}. - Russian)

PERIODICAL Radiotekhnika 1957, Vol 2, Nr 2, pp 150 - 156 (U.S.S.R.)

Received: 4/1957 Reviewed: 6/1957

ABSTRACT Computation of the reflection coefficient R. is carried out for some concrete types of dielectric insets and conical transitions between two spherical wave conductors. Its order of magnitude depends upon the law according to which the propagation constant h changes towards the coordinate z. Therefore, determination of the reflection coefficient depends upon the computation of the propagation constant for concrete cases. Here the task is solved for an inset made of a homogeneous nonconductor of the shape of a rotating body with an inclined generatrix and an axis coinciding with that of the waveconductor.
The propagation constant in any cross section of a wave conductor with such an inset will be equal to that of the wave conductor with nonconducting rod which is located in the axis of the wave conductor in that case in which the rod radius b is equal to the radius of the inset in the cross section concerned.

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SOV/19-59-16-97/317

AUTHORS: Persikov, M.V., Kazantsev, Yu.N., Kozelev, A.I. and Nazin, N.P.

TITLE: A Field Indicator in the Waveguide of the Round Section

PERIODICAL: Byulleten' izobreteniy, 1959, Nr 16, p 30 (USSR)

ABSTRACT: Class $21a^{4}$, 48_{68}, Nr 121824 (606875/26 of 2 Sep 58). In the above indicator, with a rotating section of the round waveguide, in order to increase sensitivity, two waveguides are used. The axis of the metering rectangular waveguide is perpendicular to the axis of the round waveguide. The latter has a round orifice on its surface for communication between the waveguides. By metering, the surface of the large wall is either parallel or perpendicular to the axis of the round waveguide.

Card 1/1

SOV/109-4-1-20/30

AUTHORS: Kazantsev, Yu.N. and Meriakri, V.V.

TITLE: Measurement of the Attenuation in Ring Waveguides (Izmereniye zatukhaniy v kol'tsevykh volnovodakh)

PERIODICAL: Radiotekhnika i Elektronika, 1959, Vol 4, Nr 1, pp 131 - 133 (USSR)

ABSTRACT: A ring waveguide consists of a series of identical metallic rings having a common axis and spaced at small intervals from each other. Such a structure produces an additional attenuation of the H_{on} waves in comparison with the losses in a normal circular waveguide of the same diameter. The attenuation of ring waveguides having an internal diameter of 18 mm was measured experimentally at a wavelength of 8 mm. The equipment used in the measurement is illustrated diagrammatically in the figure on p 132; this consisted of a klystron oscillator which was modulated by means of rectangular pulses, a decoupling attenuator, a calibrated attenuator, an exciter of the H_{01} wave, a helical filter, a coupling iris, the investigated waveguide (which was connected as a resonator), a shorting plunger, a detector and an

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oscillograph. The investigated samples consisted of a set of equidistantly spaced copper rings having a rectangular cross-section; the rings were situated in a stiff dielectric shell, having a permittivity of 3.2 and a loss tangent of 0.02. The measured results are shown in Tables 1 and 2. Table 1 shows the increase in the attenuation for five different samples for various values of ring spacing and width. Table 2 shows the increase in the attenuation for various values of the elliptical deformation of the rings. From the result, it is seen that the elliptical deformation results in a considerable attenuation, whereas in a perfectly symmetrical waveguide, attenuation of the H_{01} wave is only slightly more than that in a normal circular waveguide. There are 1 figure, 2 tables and 3 references, 2 of which are Soviet and 1 English.

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Measurement of the Attenuation in Ring Waveguides

ASSOCIATION: Institut radiotekhniki i elektroniki AN SSSR (Institute of Radio Engineering and Electronics of the Ac.Sc.USSR)

SUBMITTED: May 4, 1958

Card 3/3